USER'S MANUAL

WDR(Wide Dynamic Range) COLOR DAY & NIGHT CAMERA

WDR

WIDE DYNAMIC RANGE

WDR is a Powerful and Ultra advanced Technology to Capture Cleaner, Superior High Resolution pictures at the same time even the Dark part when observing the objects under a strong back light

WDR OFF   **WDR ON**

BLC

SPOTLIGHT BLC FUNCTION

Spotlight BLC function is especially effective to Read the number plate of the vehicles in the street or parking lot at night time. Especially users can adjust and select the special required area to Observe the target object under the strong spots of lights exist.
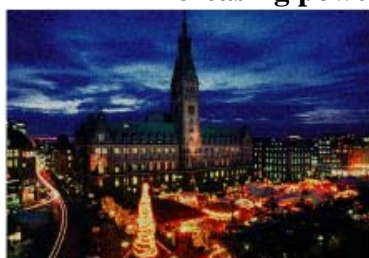
NORMAL   **SPOTLIGHT BLC**

3D DNR

3D FILTERING METHOD ADVANCED DNR TECHNOLOGY

Newly Developed 3D filtering method of DNR enhances Excellent Efficient at night time. 3D Filtering of the video signal optimizing the Signal to noise, allowing the much better visibility and it enhances increasing powerfully SENS - UP to 256 times in low light condition.

DNR OFF   **DNR ON**

Precautions for use

☞ Please read this manual enough before using this camera to obtain the skill
Of correct operation.

Cautions when using

☞ Do not open the camera body and touch to prevent electric shock.
☞ Do not insert other object into camera body to prevent hazards of fire and electric shock.
☞ Do not touch with wet hands to prevent electric shock.
☞ Do not pull out by taking power cord when plug out from the outlet.
☞ Must pull out by taking plug socket.
☞ If the camera has burning smells, please plug out and ask to shop where you bought
    It or the nearest A/S center.

Cautions when Install

☞ Plug on after installation of all device.
☞ Do not install the camera face to strong light directly.
☞ Do not install or use the camera in places where the humidity is high.
☞ Do not install near the cooling device or heating device.
☞ Do not install the camera where is high humidity or heavy dust.
☞ Do not install the camera to the place where it has physical shocks.
☞ Do not expose the camera to rain or moisture.
☞ This products must have use DC adaptor for power.

C O N T E N T

◈ WDR (Wide Dynamic Range)
- Camera has very strong compensation performance in WDR. It always shows obvious,
  Clear and perfect light contrast picture in environment.

◈ 560TV Lines
- Unification of DNR Technology and Sony Super HAD CCD image sensor provides Clear & Superior
  High resolution of 560 TV lines.

◈ Day & Night
- Up to the lighting conditions, the video automatically switching to color mode in bright zone
  And Monochrome mode in dark zone making to achieve safe and perfect 24 hours surveillance.

◈ Illumination
- Ultra Advanced DNR technology enhanced incredibly minimum illumination of amazing 0.00006 Lux
  With capture of good image under the extremely low light conditions.

◈ Illumination
- DNR technology solved removing the trouble of ghost figures and displaying clearer, superior
  High resolution even in extremely low light circumstance.

◈ Disk Saving Effects
- Upmost and advanced DNR technology camera picture quality has a disk saving effects due to
  Image sizes are smaller than standard CCTV camera image.

◈ DNR DSP Chip
- DNR is superior DSP chipset enhanced various and powerful function of high resolution,
  Day & Night, Removing camera noise and sense up, as well. It is the highest and
  Advanced technology that is unified Up-most necessary functions by one DSP chipset
  Enhanced powerful surveillance functions.

◈ Additional Functions
  OSD is available (Support Multi- Languages of 8 Country)
  Privacy Masking Funtion(8 Zones)
  Sens-up(X256)
  Digital Zoom(X 10)

S P E C I F I C A T I O N

Setup Menu

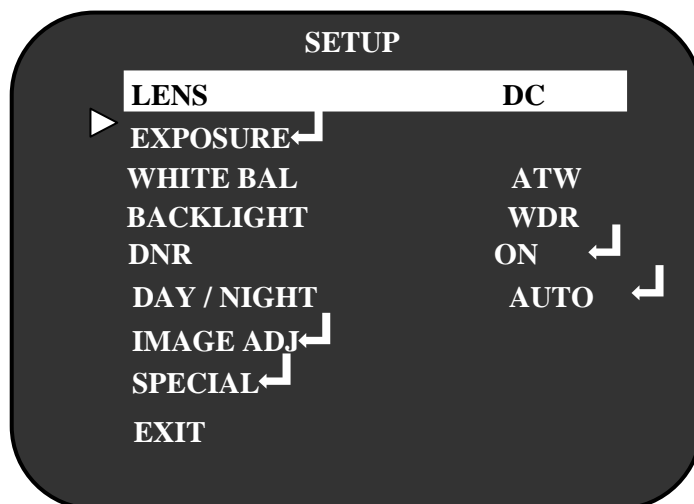| SET UP MENU	DEFAULT SET	M E N U
① LENS	DC ONLY	

② EXPOSURE	SHUTTER : -
	AGC : LOW
	SENS_UP : OFF
		SHUTTER : A.FLK
		     MANUAL(x 256 ~ 120K)
		     ESC(BRIGHTNESS : Level Selectable)
		AGC : OFF / LOW / HIGH
		SENS_UP : OFF / AUTO(2~256 Level Selectable)
		RETURN

③ WHITE BAL.	ATW	INDOOR / OUTDOOR / AWC / ATW MANUAL(RGAIN : Level Selectable, BGAIN : Level Selectable)
④ BACKLIGHT	OFF	WDR : LOW / MIDDLE / HIGH BLC : TOP / DOWN / LEFT / RIGHT OFF
⑤ DNR	ON	ON(LIMIT : 0 ~ 32 Level Selectable) / OFF
⑥ DAY / NIGHT	COLOR	COLOR / B/W / AUTO / EXTERNAL DWELL TIME : 5 ~ 60SEC DURATION TIME : SLOW / FAST
⑦ IMAGE	FREEZE : OFF V-REV : OFF H-REV : OFF DZOOM : OFF SHARPNESS : ON	FREEZE : ON / OFF V-REV : ON / OFF H-REV : ON / OFF DZOOM : ON / OFF (0 ~ 255 Level Selectable) SHARPNESS : ON / OFF (1 ~ 31 Levlel Selectable) RETURN
⑧ SPECIAL	Refer to the next page	
⑨ EXIT		Save all the SETUP Menu and then exits

SPECIAL MENU

SEPECIAL MENU	DEFAULT SET	M E N U
① CAMERA TITLE	OFF	ON / OFF
② SYNC	INT	INT / LL (PHASE : 0 ~ 259 Level Selectable, MODE : OFF / TRACE)
③ MOTION DET	OFF	SENSITIVITY : AREA 1 AREA MODE : OFF SEL POS : L_TOP XPOS : Level Selectable YPOS : Level Selectable FILL → SET RETURN
④ PRIVACY	OFF	AREA SEL : AREA 1 AREA MODE : TOP / DOWN / LEFT / RIGHT MASK COLOR : GREEN / RED / BLUE BLACK / WHITE / GRAY TRANSP. : Level Selectable RETURN
⑤ DIS	OFF	OFF / ON
⑥ COMM ADJ.	CAM ID : 0 BAUDRATE : 38400 PARITY : 8-N-1 RET PKT : ENABLE DISP CAM ID : OFF	CAM ID : ID Selectable BAUDRATE : 2400 / 4800 / 9600 / 1920 / 38400 / 57600 PARITY : 8-N-1 RET PKT : ENABLE DISP CAM ID : OFF
⑦ LANGUAGE	ENGLISH	
⑧ RESET	–	Returns to the level which was set by manufacturer for shipmer
⑨ RETURN	–	Return to the SETUP menu

MENU SETUP

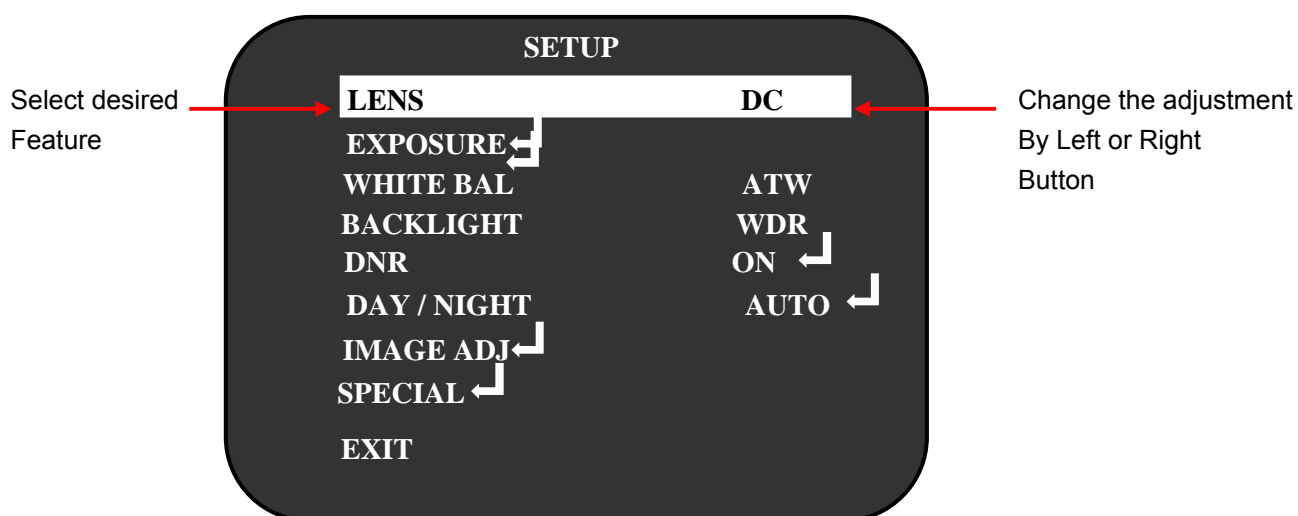Menu could be adjusted by the OSD button of the camera

1. Press the setup button.
   ● Setup menu will be displayed on the monitor

```
                    SETUP

        LENS                DC
     ▶  EXPOSURE◄┛
        WHITE BAL           ATW
        BACKLIGHT           WDR ┛
        DNR                 ON  ◄┛ ┛
        DAY / NIGHT         AUTO   ◄┛
        IMAGE ADJ◄┛
        SPECIAL◄┛

        EXIT
```

2. Move and Select to function what you want to control by the button.
   ● Move the arrow indicator UP or Down to indicate onto desired feature by pressing the UP or Down button

Select desired ⟶   Change the adjustment
Feature   By Left or Right
                     Button

```
                    SETUP

        LENS                DC
        EXPOSURE◄┛
        WHITE BAL           ATW
        BACKLIGHT           WDR ┛
        DNR                 ON  ◄┛
        DAY / NIGHT         AUTO  ◄┛
        IMAGE ADJ◄┛
        SPECIAL◄┛

        EXIT
```

3. Menu Setting Up change by Left or Right Button
   ● Available value or Status will be displayed by pressing the Left or Right button. Please press the Button until desired features appears.

4. After complete the adjustment, move the arrow indicator to "EXIT" and press the "SET" button to Exit.
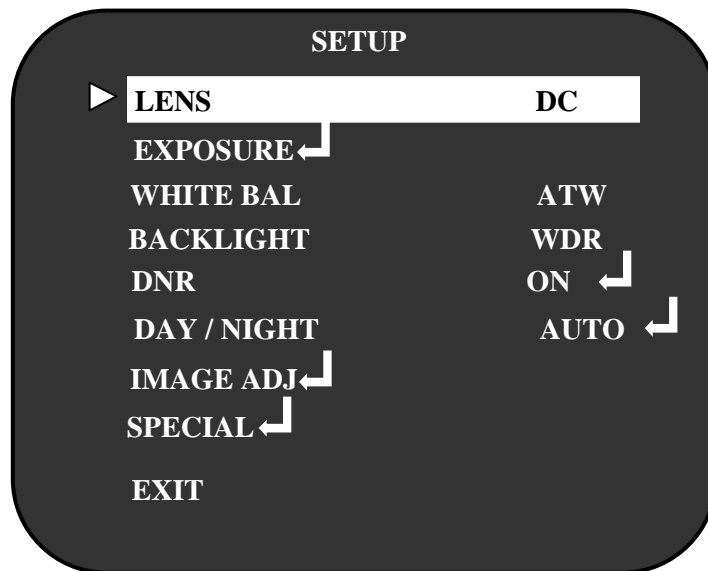
CAUTION

● Moving available to submenu by moving ◄┛ arrow to desired feature

● Access are not available to submenu on the mode of " ----- ".

L E N S (O P T I O N)

It's function of control the picture brightness.

1. Move to arrow indicator to "LENS" by pressing of UP or Down button on the Set Up menu screen.

2. Select the desired lens type by pressing of Left or Right button.

```
                    SETUP

  ▶  LENS                    DC

     EXPOSURE ↵

     WHITE BAL             ATW

     BACKLIGHT             WDR

     DNR                   ON  ↵

     DAY / NIGHT           AUTO ↵

     IMAGE ADJ ↵

     SPECIAL ↵

     EXIT
```

➡ **DC / VIDEO :** DC Auto IRIS Lens

CAUTION

● Available to control the brightness when selected DC. Brightness control range will be

```
              LENS

  BRIGHTNESS      1--------1---------1 35



           Press Set to
```
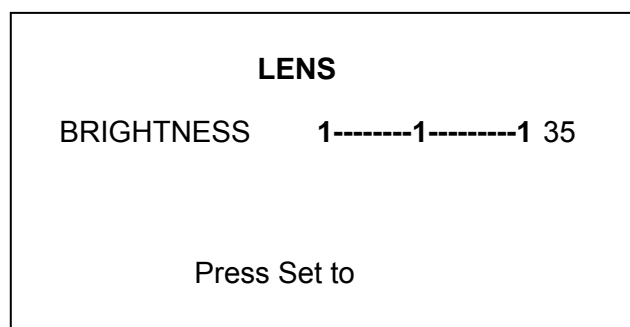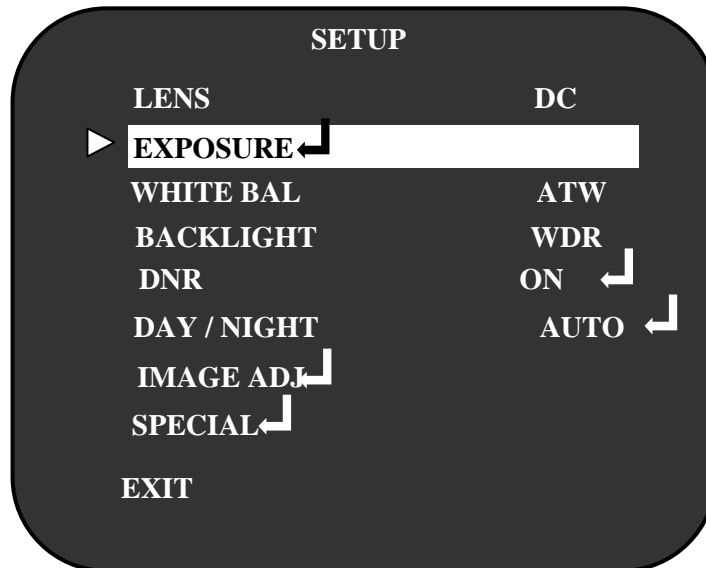
➡ **MANUAL**:Manual Lens

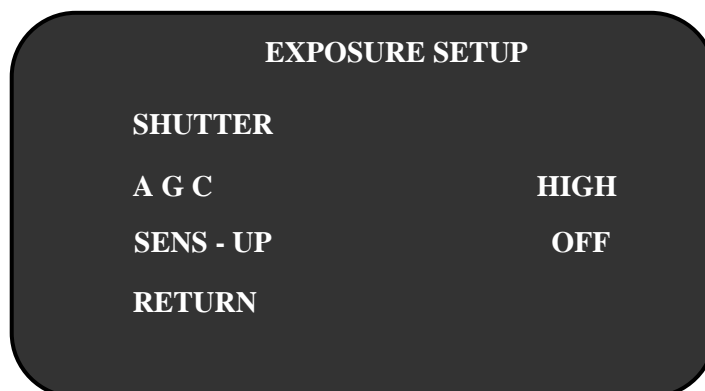3. Press the SETUP button to return previous menu.

EXPOSURE

It's a function of selecting the Automatic shutter speed control or Manual shutter speed control.

1. On the Set Up menu screen, select " EXPOSURE" by using of UP or Down button.
2. Select desired shutter mode by pressing of Left or Right Button.

```
                        SETUP

         LENS                    DC
      ▷  EXPOSURE ↵
         WHITE BAL             ATW
         BACKLIGHT             WDR
         DNR                   ON   ↵
         DAY / NIGHT           AUTO ↵
           IMAGE ADJ ↵
         SPECIAL ↵

         EXIT
```

● FLK : Select "FLK" mode when it has flickering by unmatched of electric lights and radio waves.
● ESC : Available automatic shutter speed control. Brightness could be automatically controlled when
          Selected "ESC" mode.
● MANUAL : Shutter speed could be controlled by manually.

```
                EXPOSURE SETUP

         SHUTTER

         A G C                 HIGH

         SENS - UP             OFF

         RETURN
```

● AGC(AUTO GAIN CONTROL):

The higher the gain level, the brighter the screen makes the highter noise.

OFF : Deactivates the AGC function
LOW : Allows automatic gain control from "0 ~ 30dB.
HIGH : Allows automatic gain control from "0 ~ 42dB.

```
                           LIMIT

         AUTO                            X 2


         Press   SET   to   Return
```

● SENS-UP :

When it is night and/or dark condition, the camera automatically detects the light level
and maintains a clear picture if this mode is activated.

OFF : Deactivates the SENS-UP function.
AUTO : Activates the SENS-UP function.

● RETURN

Select this is to save the changes in the EXPOSURE menu and return to SETUP menu.
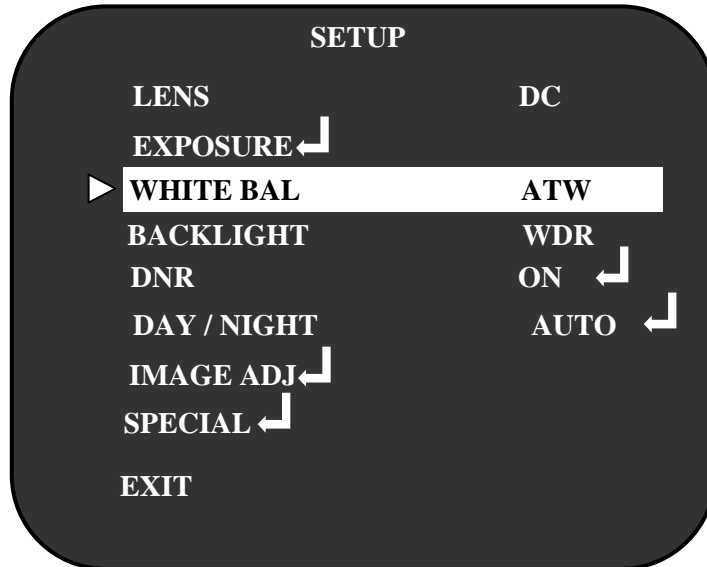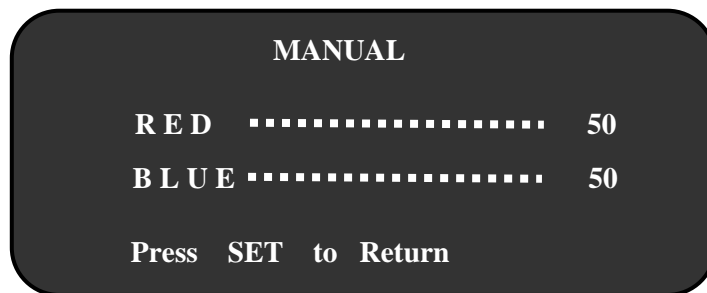
WHITE BALANCE

Use the White Balance function when need to color control on the screen.

1. Move the arrow indicator to 'WHITE BAL' by pressing of SET button on the SETUP Menu screen.

2. Select desired mode by using of Left or Right button.

```
                    SETUP

        LENS                    DC
        EXPOSURE ↵
    ▶  WHITE BAL             ATW
        BACKLIGHT           WDR
        DNR                  ON ↵
        DAY / NIGHT        AUTO ↵
        IMAGE ADJ ↵
        SPECIAL ↵

        EXIT
```

* Select one of the following 5 modes for user's purpose.

●   ATW : It is suitable in the color temperature ranges from 1,800˚ K to 10,500˚ K

   INDOOR : Select this mode when the color temperature is between 4500°K and 8500°K

   OUTDOOR : Select this mode when the color temperature is between 1800°K and 10500°K

●   AWC → SET : To find the optimal setting for the current luminance environment in this mode, set the point

   set the point the camera towards a sheet of white paper and press the SET button.

   If the environment changes, readjust it.

● MANUAL : Select this to fine-tune White Balance manually, Set White Balance first by using the

   ATW or AWC, Select the Manual mode and press the SETUP button to increase or

   Decrease the value of R-Gain(RED) and B-Gain(Blue) while watching the color of image.

```
                MANUAL

        R E D  ················· 50
        B L U E ················· 50

        Press   SET   to   Return
```

┌─────── **CAUTION** ───────┐

● Proper White Balance may not be worked under the following conditions. In that case,
   Select the AWC mode

● When the scene of object has most high color temperature.(Ex: Blue Sky, Sunset)

● When the scene of object is so dim

● When install the camera in place of the changing illumination and / or faces directly to
   Fluorecent lights.

BACK LIGHT(BLC)

This camera provide intelligent light level control to overcome the severe Backlight condition.

1. Move the arrow indicator to 'BACKLIGHT' by pressing of UP or Down button on the SETUP Menu screen.

2. Select the desired mode by pressing of Left or Right button.

```
                    SETUP

        LENS                DC
        EXPOSURE⏎
        WHITE BAL           ATW
    ▷   BACKLIGHT           OFF
        DNR                 ON  ⏎
        DAY / NIGHT         AUTO ⏎
        IMAGE ADJ⏎
        SPECIAL ⏎

        EXIT
```
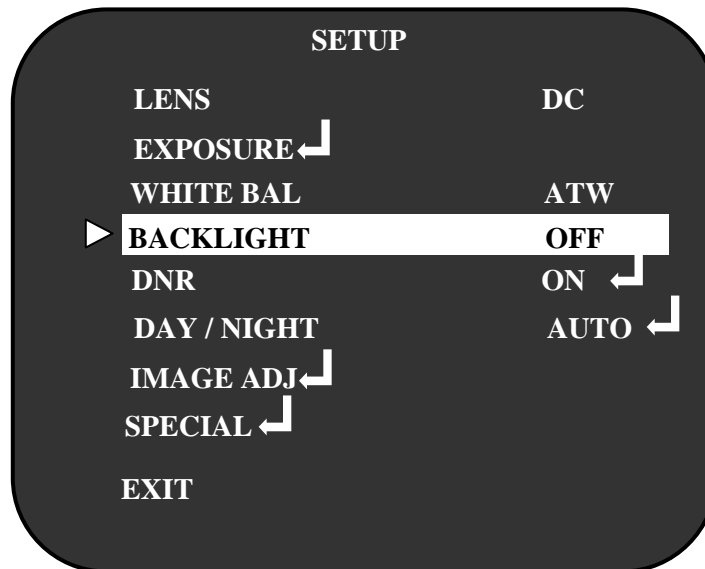
● WDR : When there are both of bright & dark areas at the same time, this mode makes both areas distinctiv

● OFF : WDR function will not operated.

● BLC : Enables a user to directly select a desired area from a picture and to view the area clearly.

W D R	**OFF**

3. Select a desired mode using the Left and Right buttons and press the SET button.
   Select "WDR" to adjust the WDR LIMIT and LEVEL.

● LIMIT : Adjust the WDR Sensitivity by selecting LOW, MIDDLE or HIGH.
● LEVEL : Adjust the WDR Brightness by controlling the bar fro 0 ~ 100.

```
                    WDR   LIMIT

        LIMIT                    MIDDLE
        LEVEL ···················   50

        Press   SET   to   Return
```

Select " BLC " to adjust the area to be enhanced and enhancement level.

```
                    B L C   SETUP

        T O P    ···················    27
        BOTTOM···················    82
        L E F T  ···················    42
        RIGHT   ···················    42

        LEVEL                    MIDDLE

              Press   SET   to   Return
```

┌─── **CAUTION** ───┐

● You cannot use the WDR mode when MANUAL or A.FLK mode in " SHUTTER "
   menu is selected.
● Since the following symptoms may occur according to the ambient illumination when
   WDR is selected, set it to OFF.
        Color or Screen changes unnatually.
        Noise appears in the bright part of the screen.

● Since the performance of the WDR function may be affected by the area of the bright
   part of the screen, optimize the installation angle for the best WDR performance.

● If you increase LIMIT, the screen display may be distorted.

● For the performance of WDR function, using DC IRIS lens rather than manual lens is
   recommended

D N R

This function reduce the background noise in a low luminance environment.

1. When the SETUP menu screen is displyed, select " DNR " by using the UP and DOWN buttons

```
                    SETUP

    LENS                    DC

    EXPOSURE ↵

    WHITE BAL               ATW

    BACKLIGHT               WDR

  ▶ DNR                     ON  ↵

    DAY / NIGHT             AUTO ↵

    IMAGE ADJ ↵

    SPECIAL ↵

    EXIT
```
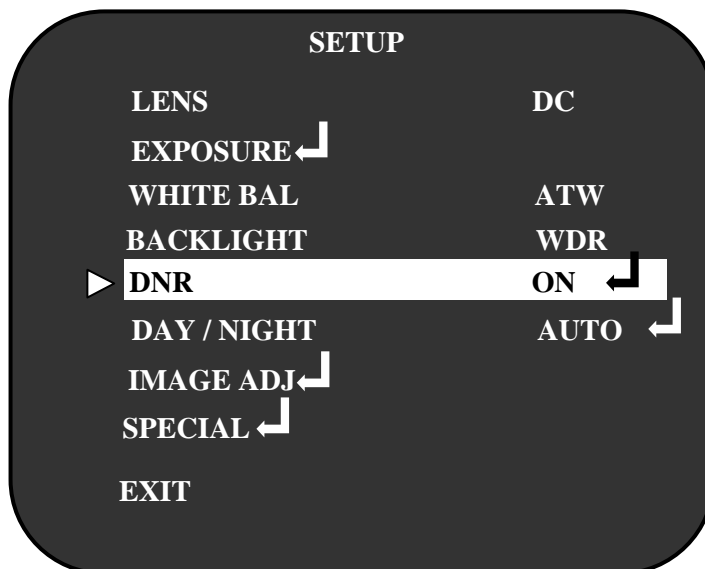
2. Select a desired mode using the Left and Right buttons.
   - ● ON   : Activates DNR, Noise is reduced.
   - ● OFF : Deactivates DNR, Noise is not reduced.
3. Set the DNR mode to " ON " and press the SET button to adjust noise reduction level.

```
                    D N R


    LEVEL ·················· 20


    Press   SET   to   Return
```
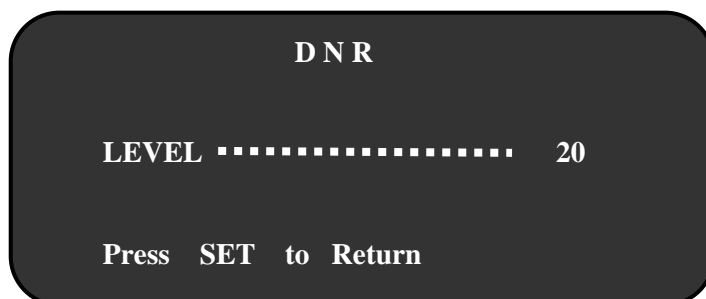
CAUTION

● You cannot set the DNR to "ON" or "OFF" when the AGC mode of the EXPOSURE menu is " OFF "

● When the adjusting the noise reduction level of the DNR mode, REMEMBER that the higher the level set, the more noise level will be reduced but that after image may also occur.

DAY / NIGHT

The pictures could be displyed in color of black and white.
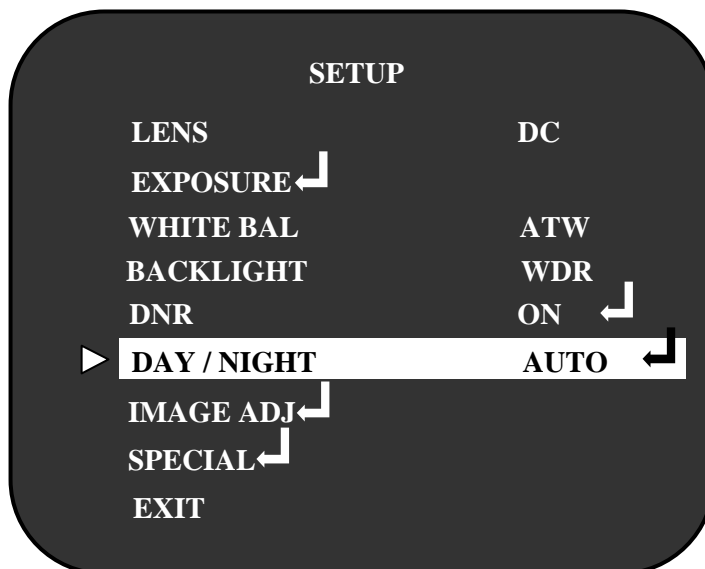
1. Select " DAY/ NIGHT" using of UP or Down button on the SETUP the screen.

```
                    SETUP

        LENS              DC
        EXPOSURE↵
        WHITE BAL         ATW
        BACKLIGHT         WDR
        DNR               ON  ↵
   ▶   DAY / NIGHT         AUTO  ↵
        IMAGE ADJ↵
        SPECIAL↵
        EXIT
```

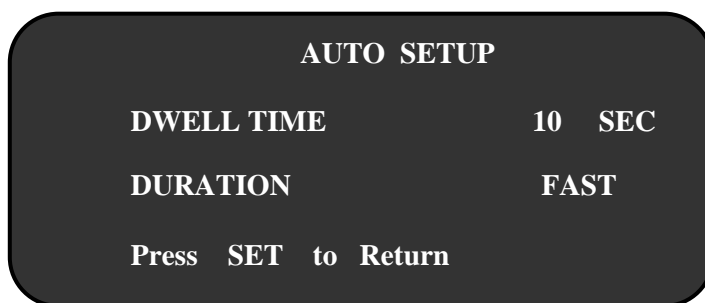2. Select a desired mode using the Left and Right buttons according to the picture displyed you want.

COLOR : The picture is always displyed in color.
B/W : The picture is always displyed in black and white
AUTO : The mode is automatically switches to " COLOR " in normal condition
          But it switches to " B/W " mode when ambient illumination is low.
          To Set the switching time or speed for AUTO mode, press the SET button.

```
            AUTO  SETUP

   DWELL TIME            10   SEC

   DURATION                 FAST

   Press   SET   to   Return
```

DWELL TIME : Duration time could be selected by changing the DAY / NIGHT mode.
          → 5s, 7s, 10s, 20s, 30s, 40s, 50s, 60s.

DURATION : Brightness of the illumination could be selected by changing the DAY / NIGHT mode.

	Color → B/W	B/W → Color
Fast	2.5 Lux	4 Lux
Slow	0.8 Lux	6 Lux

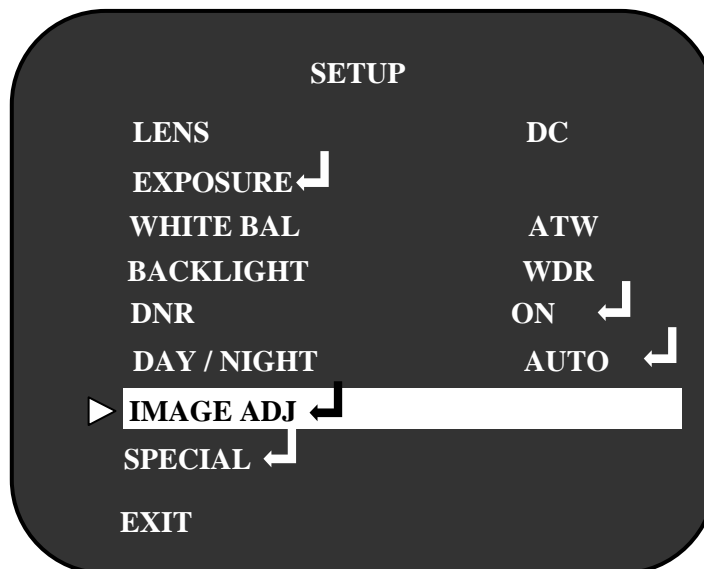* The brightness of illumination is changeable by installed environment.

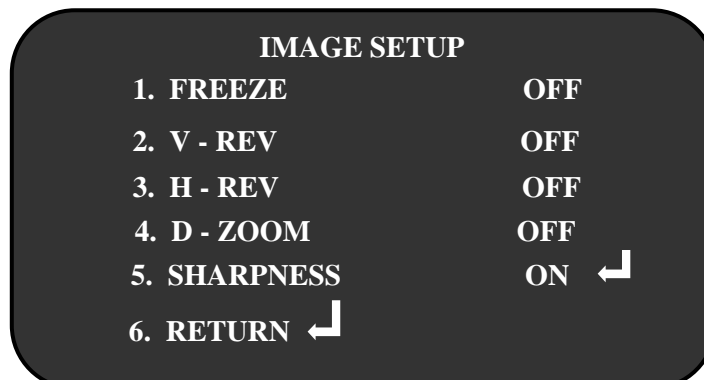**EXTERN :** This mode allows you to apply a desired filter to external signals.

CAUTION

- When using a Video Auto Iris Lens, if you set the lens level to low, it automatically switching between Color and Black and White may not occured.

- You cannot control the DAY / NIGHT menu when AGC in the EXPOSURE menu is "OFF" . At this time, the exchange between DAY mode and NIGHT mode operates as like selecting " COLOR" mode.

- The OSD key does not working for 3 seconds when switching to COLOR or B/W to ensure stable camera operation.

- The camera may focus less well under infrared illumination than under normal illumination

- Since the camera may not focus as well under infrared illumination at night as it does under normal illumination, install an Extra-Low dispersion Lens to obtain sharp pictures.

IMAGE ADJ.

1. When the SETUP menu screen is displyed, select "IMAGE ADJ." by using the UP and Down buttons to adjust " IMAGE ADJ."

```
                SETUP

    LENS                  DC
    EXPOSURE ⏎
    WHITE BAL             ATW
    BACKLIGHT             WDR
    DNR                   ON   ⏎
     DAY / NIGHT          AUTO  ⏎
  ▷ IMAGE ADJ ⏎
    SPECIAL ⏎

    EXIT
```

2. Select the desired mode by pressing of UP or Down buttons.

```
              IMAGE SETUP
    1.  FREEZE            OFF
    2.  V - REV           OFF
    3.  H - REV           OFF
    4.  D - ZOOM          OFF
    5.  SHARPNESS         ON   ⏎

    6.  RETURN ⏎
```
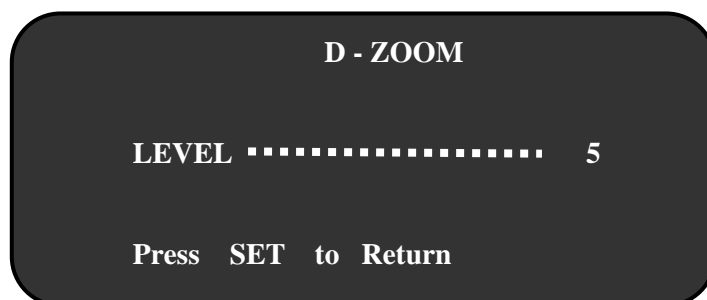
FREEZE : You can see still or moving pictures.
V - REV : You can flip the picture vertically on the screen.
H - REV : You can flip the picture horizontally on the screen.
D - ZOOM : You can use a digital zoom of x1 ~ x10.

```
                    D - ZOOM


      LEVEL ·················  5


      Press   SET   to  Return
```

SHARPNESS : As you increase this value, the picture outline becomes stronger
             and clearer. Adjust this value appropriately depending on the
             sharpness of the picture.

```
                   SHARPNESS


      LEVEL ·················  10


      Press   SET   to  Return
```

RETURN : Select this to save the settings for the IMAGE ADJ. menu and to return
          to the SETUP menu.

```
┌─────── CAUTION ───────────────────────────────────────┐
│                                                        │
│  ● When H - REV or V - REV is selected, any text in the picture also will be flipped
│    horizontally or vertically.                         │
│                                                        │
│  ● If you increase SHARPNESS level too high, the picture may become distorted or
│    noise may appear.                                   │
│                                                        │
└────────────────────────────────────────────────────────┘
```

S P E C I A L

1. When the SETUP menu screen is displayed, select " Special " by using the UP and
   Down buttons to control the SPECIAL menu.

```
                      SETUP

      LENS                        DC
      EXPOSURE     ↵
      WHITE BAL                   ATW
      BACKLIGHT                   WDR
      DNR                         ON      ↵
      DAY / NIGHT                 AUTO    ↵
      IMAGE ADJ   ↵
   ▶  SPECIAL     ↵

      EXIT
```
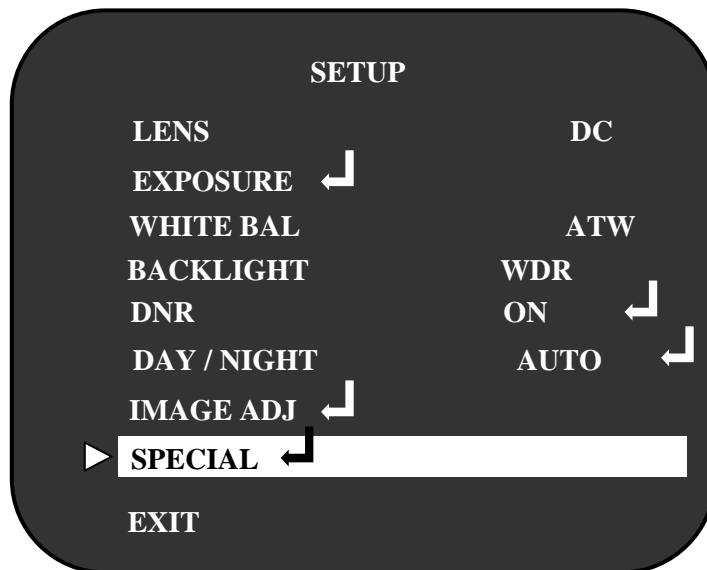
2. Select a desired mode using the UP and DOWN buttons.

```
                      SPECIAL

   ▶  1.CAM TITLE               OFF
      2.SYNC                    INT
      3.MOTION DET              OFF
      4.PRIVACY                 OFF
      5.DIS                     OFF
      6.COMM ADJ. ↵
      7.LANGUAGE
      8.RESET
      9.RETURN  ↵
```
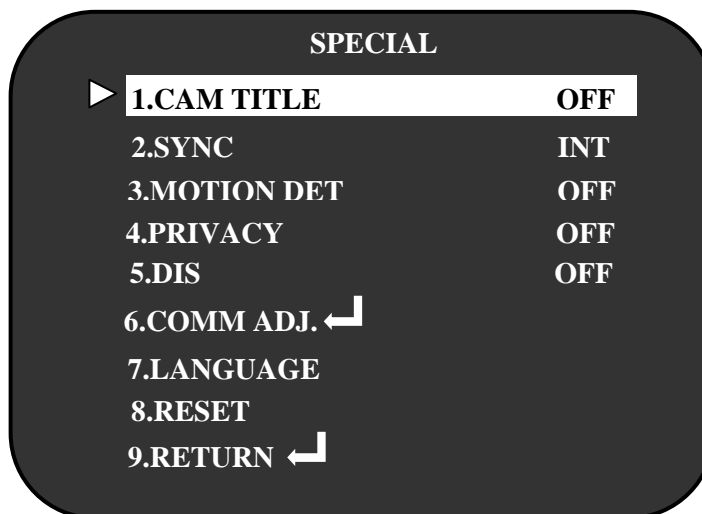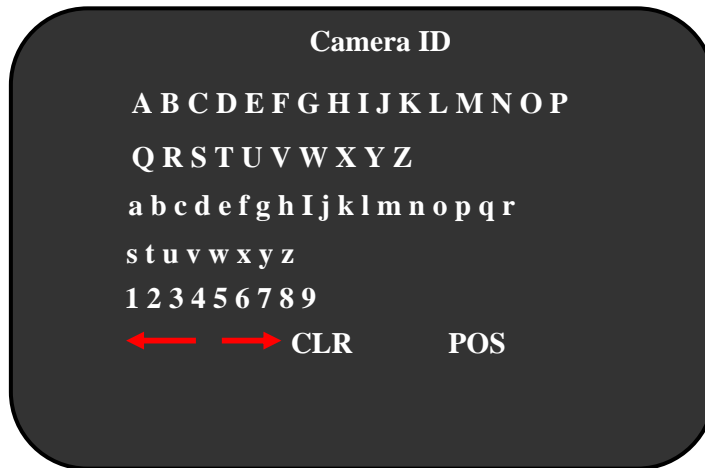
1.   CAM TITLE : If inputted CAM TITLE, CAM TITLE will be displayed onto the screen.

1-1)   Move the arrow indicator to 'Camera ID' by pressing of UP or Down button on the SETUP
        Menu screen

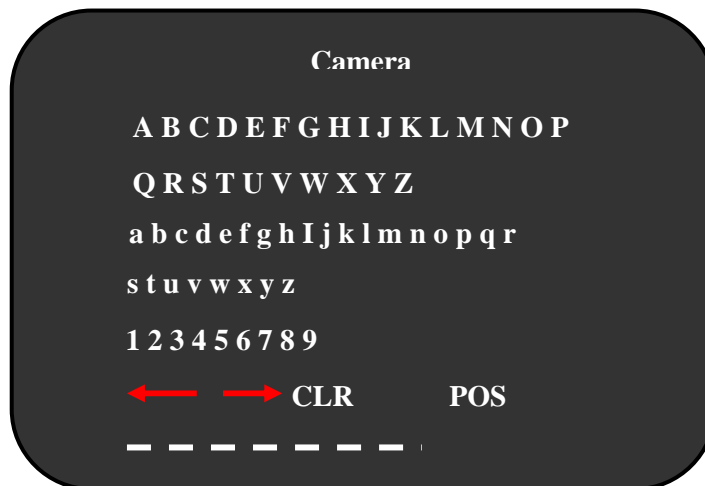1-2)   Set "ON" by using of Left or Right button.

CAUTION

● When Cam Title is set to"OFF", The Camera ID will not displayed onto the monitor.

1-3)   Press the SETUP button

Camera ID

A B C D E F G H I J K L M N O P

Q R S T U V W X Y Z

a b c d e f g h I j k l m n o p q r

s t u v w x y z

1 2 3 4 5 6 7 8 9

⟵ ⟶ CLR   POS

1-4)   ID could be entered up to 15 characters.
①   Move the cursor to character enter location by using of Left or Right button.

Camera

A B C D E F G H I J K L M N O P

Q R S T U V W X Y Z

a b c d e f g h I j k l m n o p q r

s t u v w x y z

1 2 3 4 5 6 7 8 9

⟵ ⟶ CLR   POS

— — — — — — — —

②   Select the desired character in A, B~Y, Z, a, b~y, z, 0, 1~8, 9 by using of Up, Down, Left
        And Right button.

③   Set the desired character by pressing of SETUP button.

     - The cursor will moved to next position after character select by pressing SETUP button.

④   Repeat above steps until created the desired full name .

CAUTION

● **In Case of Wrong Camera ID Input…...**
    Move the cursor to "CLR" and press the SETUP button from right to left to erase
    The characters. And repeat above steps to correct the characters again.

1-5) Select the position at camera ID should be located on the screen.

① Move the cursor to"POS" and press the SET button.


```
                    Camera ID

      A B C D E F G H I J K L M N O P
      Q R S T U V W X Y Z
      a b c d e f g h I j k l m n o p q r
      s t u v w x y z
      1 2 3 4 5 6 7 8 9
      ←——  ——→  CLR       POS
      SHOP
      — — — — — — ,
```

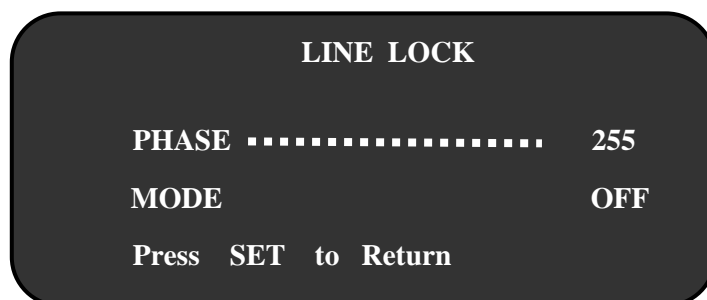② Created Camera name will be displayed.

③ Select the position by using of the 4-
   Directional button, then press the SET
   Button to confirm the position

1-6) Move the cursor to "END" and press the SET button after completed the above processing.

2. SYNC : In areas where the supply is at 60Hz, you can syncronize the output phase of multiple
        cameras using the power syncronization function(Line-Lock) without using a syncronization
        signal generator.

```
                    LINE  LOCK


    PHASE  ··················    255

    MODE                         OFF

    Press   SET   to   Return
```

INT : Internal Syncronization Type
L/L : Power Syncronization Type, Line - Lock
Press the SET button.
You can select a desired phase from 0 ~ 359 when select "phase".
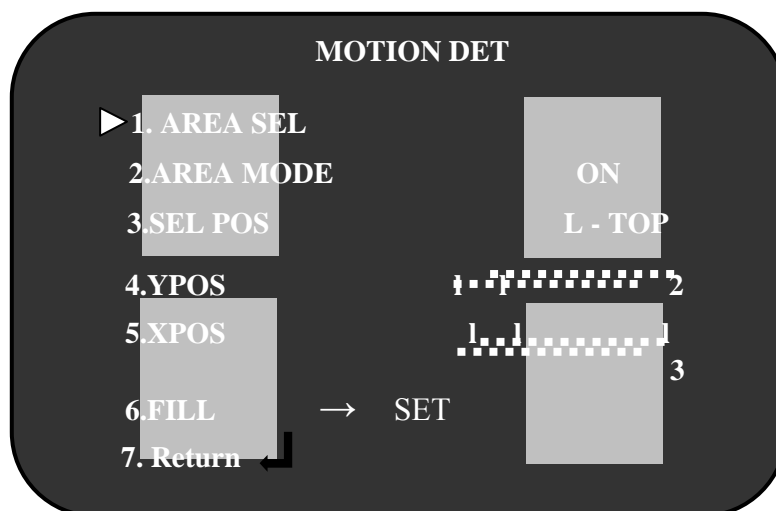You can decide a syncronization between luminance and color signal when select the "MODE"

CAUTION

● When using AC Power at 60Hz frequency, you can use the L/L type syncronization.

● When the power is DC 12V, the SYNC. menu is fixed to the " INT " mode

3. MOTION DET.:
    If you connect an alarm device to this camera, you can monitor activity
    more efficiently, because a signal is generated by the camera whenever motion
    is detected.
    The motion detection signal is output through the MD OUT port.

```
                    MOTION DET

 ►1. AREA SEL

  2.AREA MODE              ON

  3.SEL POS              L - TOP

  4.YPOS            ┃··┳·········┳2
                    ┃  ┃
  5.XPOS            ┃··┃·········┃
                                 3

  6.FILL      →    SET
  7. Return ↵
```

3-1) When the special menu screen is displyed, press the UP and Down buttons
    to adjust " MOTION DET.".

3-2) Set up the mode using the 4 direction buttons.
  ① SENSITIVITY : You can select up to 8 MD areas. When SENSITIVITY number is high,
                          Motion detection sensitivity in increase to recognize even small movement.
  ② AREA MODE : Determines whether to use the MD area selected in SENSITIVITY.
  ③ SEL POS : Detemines which of the 4 vertice of each MD area is to be used.
  ④ YPOS : Determines the coordinate of the vertical axis for SEL POS.
  ⑤ XPOS : Determines the coordinate of the horizontal axis for SEL POS.
  ⑥ FILL → SET : Fills in a selected MD area. The color of filling is sequentially selected
              as brown, orange, blue, cyan, yellowish green, yellow and red.
  ⑦ RETURN : Select this to save the MOTION DET menu settings and return to the SPECIAL menu.
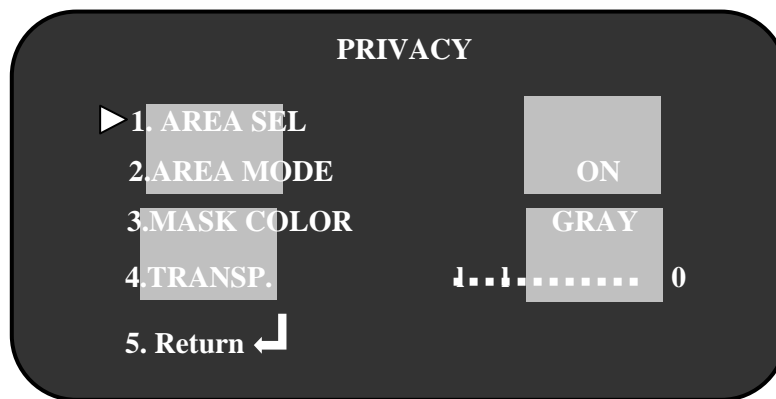

CAUTION

● MD areas show just MOTION DET menu. MD areas doesn't disply on the monitor screen.
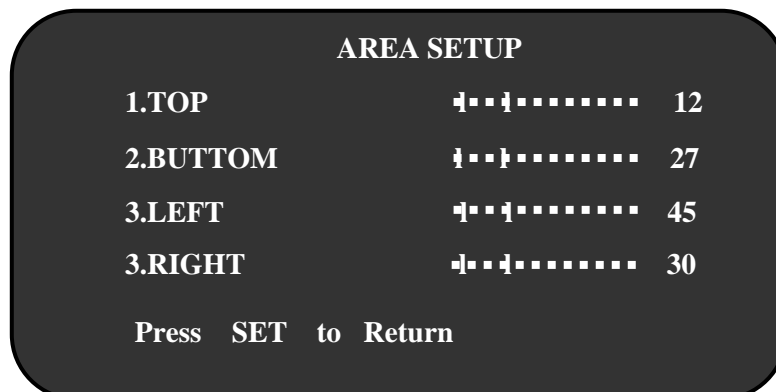
---

4. PRIVACY

Hide an area you want to hide on the screen.

4-1) When the SPECIAL menu screen is displayed, press the UP and DOWN buttons to adjust " PRIVACY "

```
                    PRIVACY

  ▶ 1. AREA SEL
    2.AREA MODE            ON
    3.MASK COLOR          GRAY
    4.TRANSP.      ╸╸╸╸╸╸╸╸╸╸╸╸ 0

    5. Return ⏎
```

4-2) Set up the area mode using the 4 direction buttons
  ① AREA SEL.: You can select up to 8 MD areas.
  ② AREA MODE :
      Determines whether to use the area selected in the AREA SEL, and the size
      and the position of the area.

```
                  AREA SETUP

    1.TOP           ╸╸╸╸╸╸╸╸╸╸╸╸  12

    2.BUTTOM        ╸╸╸╸╸╸╸╸╸╸╸╸  27

    3.LEFT          ╸╸╸╸╸╸╸╸╸╸╸╸  45

    3.RIGHT         ╸╸╸╸╸╸╸╸╸╸╸╸  30

     Press   SET   to  Return
```

③ MASK COLOR : Determine area color. You can select Gray, Green, Red, Blue, Black, White.

④ TRANSP.: Determine the transparency of selected area as controlling number 0 ~ 3.

⑤ RETURN: Select this to save the PRIVACY menu settings and return to the SPECIAL menu.

5. DIS (Digital Image Stabilizer)

　This function mitigates any picture movement due to external factors such as wind.

CAUTION

● The chance of resolution decrease is existed DIS function uses the digital zoom.

● DIS doesn't operate when background illumination is too low.

● DIS doesn't operate when object pattern is monotonic as like sky or white wall

---

6. COMM ADJ.(Communication Adjustment) :

　This function sets up the camera communication status when controlling the camera
　thorugh an external control device.

```
           COMMINICATION SETUP

   ▶1. CAM ID          ············    1
     2. BAUD RATE                   9600
     3. UART MODE                   8-N-1
     4. RET PKT                   ENABLE
     5. DISP CAM ID
```

6-1) When the SPECIAL menu screen is displayed, press the UP and DOWN buttons to adjust "COMM ADJ".

6-2) Set up the mode using the 4 direction buttons.

① CAM ID : Determines the camera's identification number (between 0 and 25).

② BAUD RATE : You can select 2400/ 4800/ 9600/ 19200/ 38400/ 57600 bps.

③ UART MODE : You can select NONE, EVEN, ODD for parity bits.

④ RET PKT : Determines whether to send a command back to the controller device
　　　　　　　When a communication control command is sent to the camera.

⑤ DISP CAM ID : Display camera title on top left of the screen.

7. LANGUAGE : You can select the menu language according to your requirements
　　　　　　　Through multi language.

8. RESET : Resets the camera settings to the factory defaults.

9. RETURN : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

```
               E X I T
```

Press the SET button in the EXIT menu to save the current settingd and exit the SET menu

T R O U B L E S H O O T I N G

PROBLEM	SOLUTION
Nothing appears on the screen	● Check the power cable and line connection Between the camera and monitor. ● Check that you have properly connected the VIDEO cables
The image on the screen is dim.	● Is the camera lens stained with dirt? Clean the lens with a soft and clean cloth. ● Adjust the monitor as required. ● If the camera is exposed to very strong light, Change the camera position. ● Adjust the lens focus properly.
The image on the screen is dark.	● Adjust the contrast feature of the monitor ● If you have an interediate device, set the 75Ω / Hi-z properly.
The camera is not working properly and the surface of the camera is hot.	● Check that you have properly connected the Camera to an appropriate power source.
MOTION DETECTION function is not active.	● Have you set " MOTION DET" menu to off? ● Have you set " MD AREA " properly?
The color of the picture is not matched.	● Check that you have properly set the "WHITE- BAL" menu
The image on the screen flickers.	● Is the camera facing direct sunlight or fluorecent lighting? Change the camera position.
The SENS - UP function does not work	● Check the AGC of EXPOSURE SETUP is "OFF". ● Check the SHUTTER OF EXPOSURE menu is "A.FLK" or "MANUAL".